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|--|-------------|----------------------|---------------------|------------------|
| 09/810,313   | 03/15/2001  | Akli Adjaoute        | IMN-002             | 9086             |
| 36532  | 7590        | 06/22/2005           | EXAMINER            |                  |
| G. VICTOR TREYZ<br>FLOOD BUILDING<br>870 MARKET STREET, SUITE 984<br>SAN FRANCISCO, CA 94102 |             |                      | SON, LINH L D       |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2135                |                  |

DATE MAILED: 06/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/810,313

Applicant(s)

ADJAOUTE, AKLI

Examiner

Linh LD Son

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-14 and 90 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-14 and 90 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

RD

### DETAILED ACTION

1. This Office Action is responding to the Amendment received on 04/07/05.
2. Claims 4 and 15-89 are canceled. Claims 1, 3, 5, 6, 8, 9, and 13 are being amended. Claim 90 is newly added.
3. Claims 1-3, 5-14, and 90 are pending.
4. Examiner excepts the amended specification.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims **1-3, 9-12, and 90** rejected under 35 U.S.C. 103(a) as being unpatentable over **Gopinathan et al, US Patent No. 5819226, hereinafter "Gopinathan", in view of Gavan et al, US Patent No. 6601048B1, hereinafter "Gavan"..**

7. As per claim 1, Gopinathan discloses "A method for detecting and preventing electronic fraud in electronic transactions between a client and a user, the method comprising: generating a fraud detection and prevention model software component for using a plurality of intelligent technologies to determine whether information sent by the user to the client associated with a new electronic transaction is fraudulent" in (Col 4

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lines 43-63, Col 17 lines 55-65, and Col 31 lines 24-50), "wherein the model software component is trained on a database of past electronic transactions provided by the client; querying the model software component with a current electronic transaction to determine whether information sent by the user to the client associated with the current electronic transaction is fraudulent; and updating the model software component with the current electronic transaction" in (Col 4 lines 43-62). Gopinathan also teaches the prevention model software component as a rule-based reasoning in (Col 1 lines 64-67). However, Gopinathan is silent on "wherein the fraud detection and prevention model software component comprises a plurality of sub-models, each sub-model implementing an intelligent technology to determine whether the electronic transaction is fraudulent, wherein the plurality of sub-models respectively implement neural network technology, rule-based reasoning technology, data mining technology, and case-based reasoning technology". Nevertheless, Gavan discloses the "System and Method for Detecting and Managing Fraud" invention, which includes the sub-models above to detect electronic fraud in (Col 2 lines 45-55, Col 3 lines 11-22, Col 4 lines 1-7, and Col 25 lines 1-7). Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to incorporate the sub-models in Gavan's invention with Gopinathan's invention to provide a strong and detail analyzation and detection system to prevent fraudulent.

8. As per claim 2, the method of claim 1. However, Gopinathan is silent on "the electronic transactions comprise web-based transactions and transactions conducted

over wireless networks with the use of cellular phones". Nevertheless, Gavan does disclose "the electronic transactions comprise web-based transactions and transactions conducted over wireless networks with the use of cellular phones" in (Col 8 lines 30-55, and Col 13 lines 13-35). It would have been obvious at the time of the invention was made for one having ordinary skill in the art to incorporate the teaching of Gavan with Gopinathan to detect fraudulent electronic transaction to best server a highly grown and complex environment such as cellular transaction.

9. As per claim 3, Gopinathan discloses "the system of claims 1, wherein the plurality of software routines for training each one of the sub-models comprises one or more of the following: a neural network training routine; a data mining training routine; a multi-agent training routine; a case-based reasoning training routine; a rule-based reasoning training routine; a fuzzy logic training routine; a constraint programming training routine; and a genetic algorithm training routine" in (Col 5 lines 17-33, and Col 6 line 5 to Col 7 line 24).

10. As per claim 9, Gopinathan discloses "the method of claim 8, wherein running the binary file to generate an output decision on whether the electronic transaction is fraudulent comprises running the plurality of sub-model software components to generate a plurality of sub-model decisions and combining the plurality of sub-model decisions to generate the output decision" in (Col 28 line 16 to Col 31 line 23).

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11. As per claim 10, Gopinathan discloses “the method of claim 9, wherein combining the plurality of sub-model decisions to generate the output decision comprises assigning a vote to each sub-model decision and generating the output decision based on the majority of votes determining whether the electronic transaction is fraudulent or not” in (Col 28 line 16 to Col 31 line 23).

12. As per claim 11, Gopinathan discloses “the method of claim 9, wherein combining the plurality of sub-model decisions to generate the output decision comprises assigning a weighted vote to each one of the sub-models, wherein the weighted vote is assigned to prioritize the sub-model decisions, and generating the output decision based on the highest number of votes determining whether the electronic transaction is fraudulent or not” in (Col 28 line 16 to Col 31 line 23).

13. As per claim 12, Gopinathan discloses “the method of claim 9, wherein combining the plurality of sub-model decisions to generate the output decision comprises providing a plurality of meta-rules to determine how the sub-model decisions are combined to generate the output decision” in (Col 28 line 16 to Col 31 line 23, and Col 6 line 5 to Col 7 line 24).

14. As per claim 90, Gopinathan and Gavan discloses “the method of claim 1”, “wherein generating the fraud detection and prevention model software component comprises using a model training interface to select which sub-models are to be

included in the fraud detection and prevention model software component" is taught by Gavan in (Col 13 lines 13-35).

**15. Claims 5-6, 8, and 13-14, are rejected under 35 U.S.C. 103(a) as being unpatentable over Gopinathan, in view of Gavan et al, US Patent No. 6601048B1, hereinafter "Gavan", and further in view of Agrafiotis et al, US Patent No. 6453246B1, hereinafter "Agrafiotis".**

16. As per claim 5, Gopinathan and Gavan disclose "the method of claim 4". However, Gopinathan and Gavan do not disclose "wherein the fraud detection and prevention model software component comprises a binary file for implementing the plurality of sub-model software components". Nevertheless, Agrafiotis does include the model software component comprises binary files to evaluate the data (Col 12 lines 54-57, and Col 13 lines 23-26). It would have been obvious at the time of the invention was made for one having ordinary skill in the art to implement the binary files as the model software component to enable a solution to evaluate a complex environment where the multidimensional variables is necessary to describe it (Col 7 line 60 to Col 8 line 2).

17. As per claim 6, Gopinathan and Gavan disclose "the method of claim 1, wherein training the model software component on a database of past electronic transactions provided by the client comprises training the plurality of sub-model software

components" in (Col 28 line 16 to Col 31 line 23). However, "creating the binary file for implementing the plurality of sub-model software components" is not taught in Gopinathan. The similar basis of claim 5's rejection is incorporated here.

18. As per claim 8, Gopinathan and Gavan disclose "the method of claim 1, wherein querying the model software component with a current electronic transaction to determine whether information sent by the user to the client associated with the current electronic transaction is fraudulent comprises providing the information as input to the trained data file and running the trained data file to generate a output decision on whether the electronic transaction is fraudulent or not" in (Col 28 line 16 to Col 31 line 23). However, Gopinathan and Gavan do not teach "providing the information as input to the binary file and running the binary file to generate an output decision on whether the electronic transaction is fraudulent or not". Nevertheless, the implementation of binary file to generate an binary output decision on whether the electronic transaction is fraudulent or not is taught in Agrafiotis (Col 13 lines 20-63). It would have been obvious at the time the invention was made for one having ordinary skill in the art to implement the binary file for fraudulent evaluation. It would obvious to implement the binary file, because in multidimensional space data evaluation it is more comprehensive to evaluate the data in numerical format using mathematical equations (Col 7 line 60 to Col 8 line 2).



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19. As per claim 13, same rejection basis as in claim 8. Further, Agrafiotis teaches “the method of claims 1 and 55, wherein updating the model software component with the current electronic transaction comprises updating the binary file without retraining the model” in (Col 15 lines 55-65).

20. As per claim 14, Gopinathan and Gavan disclose “the method of claim 1, wherein updating the model software component with the current electronic transaction further comprises updating the database with the current electronic transaction and retraining the model to generate a new ASCII file” in (Col 6 line 5 to Col 7 line 24). However, Gopinathan and Gavan do not teaches “the model represents in binary file”. Nevertheless, since the claimed invention is directed to a complex and multi-dimensional environment, the binary file implementation must be utilized to best server the evaluation environment. This teaching is taught clearly by Agrafiotis (Col 13 lines 20-63). It would be obvious at the time of the invention was made for one having ordinary skill in the art to incorporate the binary file format to best server a complex evaluation problem.

### ***Response to Arguments***

21. Applicant has amended claims 1, 3, 5, 6, 8, 9, 13, and 90, which necessitated new grounds of rejection. See Rejections above.

***Conclusion***

22. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

**Conclusion**

23. Any inquiry concerning this communication from the examiner should be directed to Linh Son whose telephone number is (571)-272-3856.

24. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Kim Y. Vu can be reached at (571)-272-3859. The fax numbers for this group are (703)-872-9306 (official fax). Any inquiry of general nature or relating to the


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status of this application or proceeding should be directed to the group receptionist whose telephone number is (571)-272-2100.

25. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval IPAIR.I system. Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PMR only. For more information about the PAIR system, see <http://pzt-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Linh LD Son**

**Patent Examiner**

  
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